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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

WANG-HURST, KATHY W

ART UNIT	PAPER NUMBER
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2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,306	Applicant(s) SUNDBERG ET AL.	
	Examiner KATHY WANG-HURST	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Reopen Prosecution

1. Applicant's arguments with respect to the rejection(s) of claim(s) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made and a new office action is issued.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 27-29, 31-37, 39-42, and 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rozenstrauch et al. (US 5313652) in view of Tigerstedt et al. (US 2002/0187784).

Regarding claim 27, Rozenstrauch discloses a method for enabling improved handover of a user equipment communicating in a first radio access network utilizing a first radio access technology (see Abstract and col. 4 lines 5-20), said method comprising:

Measuring, at said user equipment (Fig. 1 items 104 communication unit), a first parameter for a plurality of neighboring cells of at least a second radio access network utilizing WCDMA (col. 4 lines 5-20 and Fig.3, measuring a first quality metric of adjacent channels e.g. power levels),

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measuring at least a second parameter for said plurality of cells of said second network (col. 4 lines 5-20 and Fig.3, measuring a second quality metric of adjacent channels e.g. channel interference levels);

reporting said first parameter and second parameter to a node in said first network (col. 4 lines 5-20 and Fig.3, communication unit sending both metrics to call controlling site) and

initiating handover to one of said plurality of cells in said second network based on both of said first and second measured parameters (col. 4 lines 5-20 and Fig.3, call controlling site determining if the communication unit should be redirected to a different site), and wherein

both the first and the second parameter are reported simultaneously and said first parameter is reported according to one of a limited range of values, and said second parameter is reported using a limited value range, whereby each first parameter value is reported together with one of a plurality of possible limited value ranges for said second parameter (col. 4 lines 5-20 and Fig.3, both metrics are sent to the call controlling site for handoff determination).

Rozenstrauch discloses reporting both parameters to the call controlling site but does not specifically disclose the parameters are reported using a limited range and in the same field.

In an analogous art, Tigerstedt teaches reporting power measurements associated with time range and both measurements are within the range supported by

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the mobile device (see [0054] power measurements and time measurements are correlated with each other and therefore must be reported together).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to report multiple measurements in the same field in a measuring report, as taught by Rozenstrauch, thus valid and meaningful signal measurements with respect to time ([0054]).

In addition, Rozenstrauch discloses a handoff in a generic communication network but does not specifically disclose a handoff between a WCDMA and a second communication access network.

Tigerstedt discloses a handoff between WCDMA and GSM network (see e.g. [0012] [0040][0045]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Rozenstrauch, to address specific handoff technique between two access networks such as WCDMA and GSM, as taught by Tigerstedt, thus allowing a continuous communication when the mobile station roams to a different network ([0012][0013] reducing dropped call rate).

Regarding claim 37, Rozenstrauch discloses a user equipment adapted for communicating with a first radio access network utilizing a first radio access technology or a second radio access network utilizing WCDMA, said user equipment performing measurements of at least one cell in the second network in order to determine a suitable handover cell while communicating over said first radio access network (see Abstract and col. 4 lines 5-20), said user equipment comprising:

means for measuring a first parameter and means for reporting said parameter to the first radio network (col. 4 lines 5-20 and Fig.3, measuring a first quality metric of adjacent channels e.g. power levels);

means for measuring a second parameter (col. 4 lines 5-20 and Fig.3, measuring a second quality metric of adjacent channels e.g. channel interference levels), and

means for reporting both said measured first and second parameters simultaneously to a node in said first radio access network, wherein said means are configured for reporting said first parameter according to one of a limited range of values, and for reporting said second parameter using a limited value range, whereby each first parameter value is reported together with one of a plurality of possible limited value ranges for said second parameter (col. 4 lines 5-20 and Fig.3, call controlling site determining if the communication unit should be redirected to a different site).

Rozenstrauch discloses reporting both parameters to the call controlling site but does not specifically disclose the parameters are reported using a limited range and in the same field.

In an analogous art, Tigerstedt teaches reporting power measurements associated with time range and both measurements are within the range supported by the mobile device (see [0054] power measurements and time measurements are correlated with each other and therefore must be reported together).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to report multiple measurements in the same field in

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a measuring report, as taught by Rozenstrauch, thus valid and meaningful signal measurements with respect to time ([0054]).

In addition, Rozenstrauch discloses a handoff in a generic communication network but does not specifically disclose a handoff between a WCDMA and a second communication access network.

Tigerstedt discloses a handoff between WCDMA and GSM network (see e.g. [0012] [0040][0045]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Rozenstrauch, to address specific handoff technique between two access networks such as WCDMA and GSM, as taught by Tigerstedt, thus allowing a continuous communication when the mobile station roams to a different network ([0012][0013] reducing dropped call rate).

Regarding claim 42, Rozenstrauch discloses a network node in a first radio access network, utilizing a first radio access technology, capable of communicating with a user equipment and receiving measurements of neighboring cells of a second radio access network utilizing WCDMA from the user equipment (see Abstract and col. 4 lines 5-20 and Fig.3), the node comprising:

means for simultaneously receiving measured first and second parameters of the second radio access network from the user equipment, wherein said receiving means are configured for receiving said first parameter according to one of a limited range of values, whereby each first parameter value is received together with one of a plurality of possible limited value ranges for said second parameter (col. 4 lines 5-20 and Fig.3,

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measuring a first and a second quality metrics of adjacent channels e.g. power levels and channel interference levels), and

means for selecting a target cell of said neighboring cells of said second network for handover based on said received first and second parameters (col. 4 lines 5-20 and Fig.3, call controlling site determining if the communication unit should be redirected to a different site).

Rozenstrauch discloses reporting both parameters to the call controlling site but does not specifically disclose the parameters are reported using a limited range and in the same field.

In an analogous art, Tigerstedt teaches reporting power measurements associated with time range and both measurements are within the range supported by the mobile device (see [0054] power measurements and time measurements are correlated with each other and therefore must be reported together).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to report multiple measurements in the same field in a measuring report, as taught by Rozenstrauch, thus valid and meaningful signal measurements with respect to time ([0054]).

In addition, Rozenstrauch discloses a handoff in a generic communication network but does not specifically discloses a handoff between a WCDMA and a second communication access network.

Tigerstedt discloses a handoff between WCDMA and GSM network (see e.g. [0012] [0040][0045]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Rozenstrauch, to address specific handoff technique between two access networks such as WCDMA and GSM, as taught by Tigerstedt, thus allowing a continuous communication when the mobile station roams to a different network ([0012][0013] reducing dropped call rate).

Regarding claims 28-29, the combination of Rozenstrauch and Tigerstedt discloses the method according to claim 27, wherein said first radio access network comprises one of GSM, WLAN and CDMA2000 (see e.g. Tigerstedt:[0012][0040]).

Regarding claims 31-32, 39, 44, the combination of Rozenstrauch and Tigerstedt discloses the method according to claim 27, wherein said first parameter comprises information regarding the quality of the received signal at the user equipment, and said first parameter representing the chip energy divided by noise, E_c/N_o (Tigerstedt: [0015] [0045] [0051]).

Regarding claims 33-34, 40, 45, the combination of Rozenstrauch and Tigerstedt discloses the method according to claim 27, wherein said second parameter comprises information regarding the signal strength of the received signal at the user equipment, and said second parameter represents the Received Signal Code Power (RSCP) (Tigerstedt: [0015][0045]).

Regarding claims 35-36, the combination of Rozenstrauch and Tigerstedt discloses the method according to claim 27, further comprising initiating handover to said second network based on optimizing a predetermined function depending on said first and second parameter (see Tigerstedt: [0015][0045][0051]).

Regarding claim 41 and 46, Rozenstrauch discloses the user equipment according to claim 37, wherein said first parameter is the Ec/No (Tigerstedt: [0051]), and said second parameter is the RSCP (Tigerstedt: [0050]).

Regarding claim 47, Rozenstrauch discloses the network node according to claim 42, wherein said node comprises a base station controller (col. 4 lines 5-20 and Fig.3, communication unit sending both metrics to call controlling site).

3. Claims 30, 38 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rozenstrauch in view of Tigerstedt, further in view 3GPP Technical Specification 25.215 v.3.1.0, published in December 1999, hereafter referred to as TS.

Regarding claim 30, 38 and 43, Rozenstrauch in view of Tigerstedt discloses measuring two parameters with limited range but fails to teach the ranges that the two parameters fall under. TS teaches said first parameter ranges [-24, ..., 0] dB (section 5.1.7), and said second parameter ranges [-115, ..., -25] dBm (section 5.1.1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to include the ranges taught in TS into parameters disclosed by Rozenstrauch in order improve efficiency of cell reselection process.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHY WANG-HURST whose telephone number is (571) 270-5371. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, alternate Fridays, EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KATHY WANG-HURST/
Examiner, Art Unit 2617

/HUY PHAN/
Primary Examiner, Art Unit 2617